



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,887	04/16/2004	Klemens Kohlgrueber	PO8141/LeA 35,579	8603
157	7590	12/08/2004	EXAMINER	
BAYER MATERIAL SCIENCE LLC			BOYKIN, TERRESSA M	
100 BAYER ROAD			ART UNIT	
PITTSBURGH, PA 15205			PAPER NUMBER	
			1711	

DATE MAILED: 12/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/825,887

Applicant(s)

KOHLEGRUEBER ET AL.

Examiner

Terressa M. Boykin

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-13 and 15 is/are allowed.
- 6) ☒ Claim(s) 1-3, 6 and 14 is/are rejected.
- 7) ☒ Claim(s) 4-5, 7-8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 16 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 8-20-04
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

Art Unit: 1711

**Priority**

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

**Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 1-3 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by USPub 20040220320 abstract, pages 1-4 and 8 , 9, 10, page 12 under Additives.**

Applicants' claims are directed to a continuous process for mixing a thermoplastic polycarbonate melt with at least one additive comprising adding at least one additive to a main stream that includes molten polycarbonate and then mixing the additive and polycarbonate in a static mixer said additive being in liquid form, in solution or in the form of a dispersion.

**USPub 20040220320** discloses a continuous process to prepare an functionalized olefin polymer. In a preferred embodiment the F-POA is combined with one or more other polymers, including but not limited to, thermoplastic polymer(s) and/or elastomer(s). The reference discloses that by thermoplastic polymer(s)" is meant a

polymer that can be melted by heat and then cooled with out appreciable change in properties. Thermoplastic polymers typically include, but are not limited to, polyolefins, polyamides, polyesters, *polycarbonates*, polysulfones, polyacetals, polylactones, acrylonitrile-butadiene-styrene resins, polyphenylene oxide, polyphenylene sulfide, styrene-acrylonitrile resins, styrene maleic anhydride, polyimides, aromatic polyketones, or mixtures of two or more of the above. Note that the presence or formation of the FPOA is not excluded by applicants' claimed language.

With regard to claims 1 and 14, the continuous process comprises the steps of:

- 1) combining monomer, optional solvent, catalyst and activator in a reactor system;
- 2) withdrawing Nonfunctionalized olefin polymers, i.e. PAO, solution from the reactor system;
- 3) removing at least 10% solvent, if present, from the PAO solution;
- 4) quenching the reaction;
- 5) devolatilizing the PAO solution to form molten PAO;
- 6) combining at least a portion of the molten PAO with an functional group (preferably maleic anhydride) in the presence of a radical initiator at a temperature, and for a period of time sufficient to produce F-PAO;
- 7) combining F-PAO, optionally PAO, and optionally one or more additives (such as those described therein) in a mixer, such as a static mixer, (in a preferred embodiment tackifier is not added or is added in amounts of less than

Art Unit: 1711

30 weight %, preferably less than 20 weight %, more preferably in amounts of less than 10 weight %), and mixing to produce the composition;

8) removing the composition from the mixer, and

9) pelletizing or drumming the composition;

where step 1) comprises any of the processes described herein for the production of PAO.

With regard to applicants' claims 2 and 3 the reference discloses with regard to the process of mixing that the samples were prepared consistent with testing of adhesives, in particular, hot melt adhesives, by using the olefin polymers or blending the olefin polymers, functionalized olefin polymers, additives, tackifier, wax, antioxidant, and other ingredients or components under mixing at elevated temperatures to form fluid melt. The mixing temperature varied from about 130 to about 190 C.

The reference discloses a residence time of 120 minutes or less, preferably 60 minutes or less.

Thus the reference discloses a continuous process for mixing a composition containing thermoplastic polycarbonate melt and an additive with a functionalized polyolefin. As noted above, the presence or formation of the FPOA is not excluded by applicants' claimed language.

Thus, in view of the above, there appears to be no significant difference between the reference and that which is claimed by applicant(s). Any differences not specifically mentioned appear to be conventional. Consequently, the claimed invention cannot be deemed as novel and accordingly is unpatentable.

**35 USC 112, Second Paragraph**

Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 6 the recited prepared by melting secondary polycarbonate is inconsistent with

the preceding claim 4. Note that claim 4 discloses that the side stream includes a premixture of polycarbonate melt. Thus, the processes of melting secondary polycarbonate is unclear as to the source therefrom.

**Objected Claims**

Claims 4 – 5, 7 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**Correspondence**

Please note that the cited U.S. patents and patent application publications are available for download via the Office's PAIR. As an alternate source, all U.S. patents and patent application publications are available on the USPTO web site ([www.uspto.gov](http://www.uspto.gov) <<http://www.uspto.gov>>), from the Office of Public Records and from commercial sources. Applicants may be referred to the Electronic Business Center (EBC) at <<http://www.uspto.gov/ebc/index.html>> or 1-866-217-9197.

**Correspondence**

Art Unit: 1711


Please note that the cited U.S. patents and patent application publications are available for download via the Office's PAIR. As an alternate source, all U.S. patents and patent application publications are available on the USPTO web site ([www.uspto.gov](http://www.uspto.gov) <<http://www.uspto.gov>>), from the Office of Public Records and from commercial sources. Applicants may be referred to the Electronic Business Center (EBC) at <<http://www.uspto.gov/ebc/index.html>> or 1-866-217-9197.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Terressa Boykin whose telephone number is 571 272-1069. The examiner can normally be reached on Monday through Friday from 6:30am to 3:00pm.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. The general information number for listings of personnel is ( 571-272-1700).

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

tmb

  
Examiner Terressa Boykin  
Primary Examiner  
Art Unit 1711